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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,209	01/30/2007	Adalbert Feltz	14219-118US1 5559 P2003,0658 U	
26161 FISH & RICHA	7590 01/03/200 ARDSON PC		EXAMINER	
P.O. BOX 1022	2		SAN MARTIN, JAYDI A	
MINNEAPOLIS, MN 55440-102			ART UNIT	PAPER NUMBER
			2834	
			MAIL DATE	DELIVERY MODE
			01/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)				
	10/574,209	FELTZ ET AL.				
Office Action Summary	Examiner	Art Unit				
	Jaydi A. San Martin	2834				
The MAILING DATE of this communication app	1 7	1				
Period for Reply		·				
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tin will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U S C § 133)				
Status						
1) Responsive to communication(s) filed on 30 Ja	nnuary 2007.					
	action is non-final.					
· —	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under E						
Disposition of Claims						
4)⊠ Claim(s) <u>1-14</u> is/are pending in the application.						
4a) Of the above claim(s) is/are withdraw	4a) Of the above claim(s) is/are withdrawn from consideration.					
5) Claim(s) is/are allowed.						
6) Claim(s) is/are rejected.						
7)⊠ Claim(s) <u>1-14</u> is/are objected to.)⊠ Claim(s) <u>1-14</u> is/are objected to.					
8) Claim(s) are subject to restriction and/or	r election requirement.					
Application Papers						
9)⊠ The specification is objected to by the Examine	r.					
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
12)⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a)⊠ All b)□ Some * c)□ None of:						
1.☐ Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)						
1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)						
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08)	Paper No(s)/Mail Da 5) Notice of Informal P					
Paper No(s)/Mail Date 1/07,3/06.	6) Other:					
		·				

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DETAILED ACTION

Specification

- 1. The disclosure is objected to because of the following informalities:
- The Specification cannot refer to the claims.
- Throughout the specification and claims, the Applicants refer to the chemical formulas using the "□" symbol. For example,

$$Pb_{1-3x/2-y/2} SE_x \square_{x/2-y/2} Cu^1_y (Zr_{0.5515-z} Ti_{0.4485+z})O_3$$

wherein the symbol "\(\sigma\)" stands for a vacancy in the crystal lattice. It is the Examiner's position that such symbol "\(\sigma\)" should be replaced by a variable to avoid confusion. Specifically, in claim 1, the symbol was not printed or at least is not showing in the last version of the claims. In the same claim symbol "\(\sigma\)" must be defined and claim 14 should be cancelled because it fails to further limit the parent claim once "\(\sigma\)" is defined.

Appropriate correction is required.

Drawings

2. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). Specifically, the multilayer piezoelectric component comprising ceramic material layers with a plurality of internal electrodes must be shown.

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Allowable Subject Matter

- 3. Claims 1-13 would be allowable if rewritten or amended to overcome the objection of the claims, set forth in this Office action.
- 4. The references of the Prior Art of Record fail to teach or suggest either alone or in obvious combination the limitations as set forth in claim 1, and specifically comprising the limitation of the specific lead zirconate titanate structure with the specific values of x, y and z such that the piezoelectric ceramic material corresponds to a morphotropic phase boundary.

Conclusion

- 5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.
- 6. This application is in condition for allowance except for the following formal matters:

 Objection to the claims, drawings and specification.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaydi A. San Martin whose telephone number is 571-272-2018. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaydi SanMartin
Primary Examiner
Art Unit 2834

12/23/07